

REMARKS

In the present applications, claims 1-17 are pending. Claims 1-17 are rejected by the Examiner under 35 U.S.C. §103 and claims 16-17 are objected to. In response, applicants are amending claims 1, 4, 6, 14, 16 and 17 to better describe the inventions. In view of the foregoing, applicants respectfully request reconsideration of the application.

Claim Objection

In paragraph 1 of the Office Action, claims 16-17 stand objected to under 37 CFR 1.75(c) for being in improper dependent form. Applicants have amended claims 16-17 to correct the improper dependency.

Rejection Under 35 U.S.C. §103(a)

In paragraph 3, claims 1-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Carpenter (U.S. Patent 6,199,068) in view of Cabrera (U.S. Patent 6,453,325).

Claim 1 recites in part “interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system.” Neither Carpenter, Cabrera, nor the combination of Carpenter and Cabrera teach or suggest all the claim limitations of amended claim 1. Specifically, Carpenter discloses a canonical mapper that translates data in an input format into an output format. As stated in the Office Action, Carpenter does not teach interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system.

Cabrera discloses backup and restoration for a database system using a file manager. However, the metadata definition component in Cabrera does not teach or suggest interpreting metadata to *ensure data integrity is maintained during the copying of data*. Instead, the metadata definition component in Cabrera “tracks relational tables, column definitions, and their data-types in the DBMS catalog.” (col. 9, lines 11-12). The metadata in Cabrera is used to define tables by using information, such as column definitions, and does not ensure data integrity during the copying of data. Advantageously, amended claim 1 interprets the metadata to ensure data integrity is maintained to prevent simultaneous operations such as reading and writing on the same data.

Applicants have further amended claim 1 to add limitations not taught or suggested by Cabrera, Carpenter, or the combination of Cabrera and Carpenter. Amended claim 1 now recites in part “interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system *wherein the metadata indicates a status of the data*.” Support for this amendment may be found in paragraph [21]. As discussed above, Carpenter does not teach metadata and the metadata definition component in Cabrera relates to definition of tables. Further, the metadata definition component in Cabrera also does *not* indicate the status of the data as recited in amended claim 1. Therefore, amended claim 1 is allowable over Cabrera and Carpenter.

In regards to claim 2, Carpenter does disclose the ACID protocols in col. 12, lines 43-63 as cited by the Examiner. However, Carpenter does not disclose a *relational database* that follows ACID protocols as recited in claim 2. Additionally, because claim 2 is dependent on claim 1, claim 2 is allowable for at least the same reasons as claim 1.

In regards to claim 3, Cabrera in col. 9, lines 11-13 discloses the metadata definition component tracking relational tables, column definitions, and their data-types in the DBMS catalog. However, Cabrera does not specifically teach that the metadata itself is stored in the relational database as recited in claim 3. Additionally, because claim 3 is dependent on claims 1 and 2, claim 3 is allowable for at least the same reasons as claims 1 and 2.

Applicants have amended claim 4 to claim that “the metadata comprises a state flag that indicates the status of the data.” Applicants have also deleted the limitation of the step of receiving data through a communication device from an external source. Therefore, Examiner’s arguments regarding claim 4 do not apply to amended claim 4. Additionally, because claim 4 is dependent on claim 1, claim 4 is allowable for at least the same reasons as claim 1.

In regards to claim 5, the sections of Carpenter (col. 23, lines 42-49) and Cabrera (col. 22, lines 49-65) cited by the Examiner does not make reference to “metadata.” Although the flag of “filebackupmode” in Cabrera may indicate the status of copying, there is no teaching of the flag “filebackupmode” being in the metadata. Therefore, Carpenter and Cabrera do not teach or suggest the limitation of metadata indicating the step of copying the data to the file system has been completed as recited in claim 5. Additionally, because claim 5 is dependent on claim 1, claim 5 is allowable for at least the same reasons as claim 1.

Regarding claim 6, applicants have also amended claim 6 to recite that “ensuring the data is backed up based on the metadata,” which is not taught in Cabrera or Carpenter. The cited section of Cabrera in col. 9, lines 11-25 does teach metadata and

deletion. However, the metadata in Cabrera does not indicate copying data has been completed. Finally, because claim 6 is dependent on claims 1 and 5, claim 6 is allowable for at least the same reasons as claims 1 and 5.

In regards to claims 7-9, the Office Action incorrectly recites that Carpenter teaches limitations but then cites sections from Cabrera. Assuming that the Office Action has a clerical error of reciting that Cabrera teaches, Cabrera still does not teach all the claim limitations of claims 7-9. Specifically, Cabrera (col. 27, line 59 to col. 28, line 5) only uses the metadata to reflect that the file is linked and in the proper group as opposed to determining whether to direct a request to the file system to retrieve the data as claimed in claim 7. Regarding claim 8, Cabrera in col. 28, lines 15-18 does not mention that the metadata includes information concerning the location of a most recent version of data. Instead, Cabrera compares the metadata with the list of file group to determine which reconciliation is to be conducted. On the other hand, the metadata already has the information concerning the location of the most recent version without any comparison as required in Cabrera. Additionally, because claims 7-9 are dependent either directly or indirectly from claim 1, claims 7-9 are allowable for at least the same reasons as claim 1.

Regarding claims 10-11, neither Cabrera nor Carpenter teach or suggest ensuring the integrity of the data during copy, transfer, wipe, rename, and backup operations through use of the metadata. As discussed above, the metadata in Cabrera are used to define of tables and not ensuring data integrity *during* the operations claimed in claims 10-11. Additionally, because claims 10-11 are dependent on claims 1 and 3, claims 10-11 are allowable for at least the same reasons as claims 1 and 3.

Regarding claims 12-13, the cited sections of Carpenter relate to filtering schedules for execution of work. Claims 12-13 recite filtering of the data itself as opposed to the schedules of when work is executed in Carpenter. The filtering of claim 13 for anti-virus, access-control, and security can then be used on the data. Further because claims 12-13 are dependent directly or indirectly from claim 1, claims 12-13 are allowable for at least the same reasons as claim 1.

Applicants have amended claim 14 to change the order of step b and c and add the limitation of using the “metadata that ensure the integrity of the data during copying.” Neither Carpenter nor Cabrera teach this limitation that metadata is used to ensure the integrity of the data during copying. Thus, claim 14 is allowable for the above stated reasons.

In regards to claim 15, the Office Action correctly states that Carpenter does not teach metadata. Cabrera does not teach using the metadata to determine when the data transfer is in progress and when the data transfer has been successfully completed or indicate when rollback procedures can be initiated from a backup as recited in claim 15. The metadata in Cabrera defines tables but is not used for statuses such as in progress or completion in data transfer. Therefore claim 15 is allowable for the above stated reasons.

Because claims 16-17 are dependent on claim 15, claims 16-17 are allowable for at least the same reasons as claim 15.

Conclusion

In view of the above remarks this application is in condition for allowance, and the Examiner is respectfully requested to allow this application. The Examiner is invited to call Applicants' representative at the number below if he has any questions or if there are remaining outstanding issues.

Respectfully submitted,

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